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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/667,313
Filing Date: September 23, 2003
Appellant(s): WANG ET AL.

Jonathan Harris
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/8/2009 appealing from the Office action mailed 2/4/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0133634	Luke et al.	7-2004
2004/0078469	Ishwar et al.	4-2004
5,959,989	Gleeson et al.	9-1999
6,026,442	Lewis et al.	2-2000
6,269,076	Shamir et al.	7-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-11, 13, 14, 17-24, 27, 29 and 30 are rejected under 35

U.S.C. 103(a) as being unpatentable over Gleeson et al. (hereinafter Gleeson)(U.S.

Patent No. 5,959,989) in view of Ishwar et al. (hereinafter Ishwar)(U.S. Pub. No.

2004/0078469 A1), and further in view of Luke et al. (hereinafter Luke)(U.S. Pub. No.

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2004/0133634 A1).

Regarding claims 1, 10, 21, 27 and 29, Gleeson teaches as follows:

A method or a system for resolving network connectivity (a mechanism for efficiently distributing multicast messages to subscribing entities in a computer network, see, e.g., abstract), the method comprising:

Determining whether a first device (port 1 of 220 in figure 2A) is included in a portion of a network (VLAN designation RED) in which the first device can receive information directed to all devices (port 1 and port 5 belongs to same VLAN designation RED) included within the portion of the network (determining each port with VLAN designation, see, e.g., col. 8, lines 4-18);

Obtaining a first identifier (VLAN designation) associated with the portion of the network (each port in the intermediate device obtains a VLAN designation, see, e.g., col. 8, lines 4-18);

Assigning a second identifier (LAN ID 204 in figure 2A) to the portion of the network unique to other portions of the network (each LAN and entity coupled to a port, see, e.g., col. 8, lines 4-18 and figure 2A); and

Identifying each device (each port) with LAN ID (port number (1 in figure 2A) or entity MAC address (27 in figure 2A)) and VLAN designation (R in figure 2A)(see, e.g., col. 8, lines 4-18 and figure 2B).

Gleeson does not teach that modifying the first identifier with the second identifier and associating the modified identifier with the first device and the portion of the network.

Ishwar teaches as follows:

Modifying the first identifier (VLAN ID) associated with the portion of the network to include the second identifier (Customer ID)(the customer-specific VLAN IDs are a combination of a VLAN ID and a customer ID, see, page 3, paragraph [0026] and figure 2); and

Associating the modified first identifier with the first device and the portion of the network (a network that utilizes customer-specific VLAN IDs to identify each port in the service provider edge device, see, e.g., page 3, paragraph [0031] and figure 5).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Gleeson to include a customer-specific VLAN ID by combination of two IDs together as taught by Ishwar in order to establish and maintain private broadcast domains by expanding the number of unique VLAN IDs.

Gleeson in view of Ishwar do not teach that the second identifier is based on a domain identifier.

Luke teaches of assigning VLAN ID (equivalent to applicant's second identifier) for each VLAN associated with the virtual domain (see, e.g., page 18, paragraph [0469]).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Gleeson in view of Ishwar with Luke to include assigning VLAN ID with a virtual domain in order to efficiently assign unique VLAN ID.

Regarding claims 2, 11, and 22, Gleeson teaches as follows:

Identifying a second device (port 5 of Intermediate device 220 in figure 2A) included in the portion of the network (identifying each port with VLAN designation, see, e.g., col. 8, lines 4-18)); and

Ishwar teaches the associating the modified first identifier with the second device as presented above. Therefore the limitations of claims 2, 11, and 22 are met by Gleeson in view of Ishwar.

Regarding claims 3 and 23, Ishwar teaches that presenting a first symbol identifying the first device connected to a second symbol identifying the portion of the network using the modified first identifier (a network that utilizes customer-specific VLAN IDs to identify each port in the service provider edge device, see, e.g., page 3, paragraph [0031] and 520 in figure 5). Therefore the limitations of claims 3 and 23 are met by Gleeson in view of Ishwar.

Regarding claims 4 and 13, Gleeson teaches that the portion of the network is a broadcast domain (VLAN is well-known to provide same broadcast domain from different LANs, see, e.g., col. 1, line 55 to col. 2, line 9).

Regarding claims 5, 14, and 24, Gleeson teaches that the portion of the network is a Virtual Local Area (see, e.g., col. 8, lines 4-18 and figure 2B).

Regarding claims 8 and 19, Gleeson teaches that the first device is a port (port 1 of the intermediate device 220 in figure 2A) included in a network switch (the intermediate device is a switch or hub, see, e.g., col. 7, lines 50-59).

Regarding claims 9 and 20, Gleeson teaches that the first device is coupled to other portions of the network by a network router (multicast network devices (MND) 226,

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228 in figure 2A are multicast routers, see, e.g., col. 7, lines 50-59 and figure 2A).

Regarding claim 17, Gleeson teaches that a first table (240 in figure 2B) having an entry associating an identifier of the network switch with the identifier of the VLAN (each intermediate device (equivalent to applicant's network switch) includes a VLAN designation table, see, col. 8, lines 19-29 and figure 2B).

Regarding claim 18, Gleeson teaches that a second table (240 in figure 2B) having an entry associating an identifier of the network switch with the second identifier (entity MAC addresses 27-29 in figure 2A and 2B identify the LAN (interpreted as the second identifier), see, col. 8, lines 19-29 and figure 2B).

Regarding claim 30, Gleeson teaches that the intermediate device (220-223 in figure 2A) store the VLAN designation in a memory area (see, e.g., col. 8, lines 19-29).

3. Claims 6, 7, 15, 16, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gleeson et al. (hereinafter Gleeson)(U.S. Patent No. 5,959,989) in view of Ishwar et al. (hereinafter Ishwar)(U.S. Pub. No. 2004/0078469 A1) and Luke et al. (hereinafter Luke)(U.S. Pub. No. 2004/0133634 A1), and further in view of Shamir et al. (hereinafter Shamir)(U.S. Patent No. US 6,269,076 B1).

Regarding claims 6, 7, 15, 16, 25, and 26, Gleeson in view of Ishwar and Luke teach all the limitations of claims 1, 10 and 21 as presented above except for including Management Information Base configure to store an identifier of the VLAN and using a Simple Network Management Protocol to obtain the identifier of the VLAN from the MIB.

Shamir teaches as follows:

Network Management System utilizes the Management Information Base maintained in the network devices (see, e.g., col. 8, lines 9-10);

The NMS obtains status about a device and configures settings and functions within the MIBs in the managed network device via the SNMP protocol (see, e.g., col. 8, lines 20-24); and

The MIB contains the status of all physical and logical elements including the status of all VLANs (see, e.g., col. 8, lines 38-42).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Gleeson in view of Ishwar and Luke to include MIB to store the identifier of the VLAN and SNMP to obtain the identifier of the VLAN from the MIB as taught by Shamir in order to manage efficiently the devices in a communications network in the reliable type of database.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gleeson et al. (hereinafter Gleeson)(U.S. Patent No. 5,959,989) in view of Ishwar et al. (hereinafter Ishwar)(U.S. Pub. No. 2004/0078469 A1) and Luke et al. (hereinafter Luke)(U.S. Pub. No. 2004/0133634 A1), and further in view of Lewis et al. (hereinafter Lewis)(U.S. Patent No. US 6,026,442).

Regarding claim 12, Gleeson in view of Ishwar and Luke teach all the limitations of claim as presented above per claim 3 except for indicating a system with a display to present the claimed method.

Lewis teaches that a display unit (114 in figure 1) is connected to the processor so as to display, generally in graphic form, a representation of the network including its topology and functions (see, e.g., col. 4, lines 17-20 and figure 1).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Gleeson in view of Ishwar and Luke to include a display in a system as taught by Lewis in order to provide user friendly GUI for easier and more efficient interactions in the Network Management System.

(10) Response to Argument

Appellants' arguments and Examiner's responses regarding claim 1 are as follows:

Appellants' argument:

Gleeson in view of Ishwar and Luke do not teach of assigning a second identifier to the portion of the network based on a domain identifier unique to other portions of the network.

Examiner's response:

Gleeson teaches of assigning a second identifier (LAN ID 204 in figure 2A) to the portion of the network unique to other portion of the network (addition to the first identifier (interpreted as VLAN designation), Gleeson assigns the second identifier (LAN ID) to each port, see, e.g., col. 8, lines 4-18 and figure 2A).

Gleeson does not teach that the second identifier is based on a domain identifier.

Luke teaches of assigning an identifier based on a domain identifier (VLAN ID for each VLAN associated with the virtual domain, see, e.g., page 18, paragraph [0469]).

Therefore, Luke teaches of deficiency of Gleeson of assigning an identifier based on a domain identifier.

Appellants' argument:

Gleeson in view of Ishwar and Luke do not teach of modifying the first identifier associated with the portion of the network to include the second identifier.

Examiner's response:

Gleeson teaches of assigning two identifiers as presented above (see, e.g., col. 8, lines 4-18 and figure 2A).

Gleeson does not teach of modifying the first identifier with the second identifier.

Ishwar teaches of modifying the first identifier (VLAN ID) associated with the portion of the network to include the second identifier (Customer ID)(the customer-specific VLAN IDs are a combination of a VLAN ID and a customer ID, see, page 3, paragraph [0026] and figure 2).

Therefore, Ishwar teaches, the deficiency of Gleeson, of modifying one identifier with the other identifier.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/J. S. P./

Examiner, Art Unit 2454

September 3, 2009

/NATHAN FLYNN/

Supervisory Patent Examiner, Art Unit 2454

Conferees:

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